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THE Feed SITUATION

BUREAU OF AGRICULTURAL ECONOMICS
UNITED STATES DEPARTMENT OF AGRICULTURE

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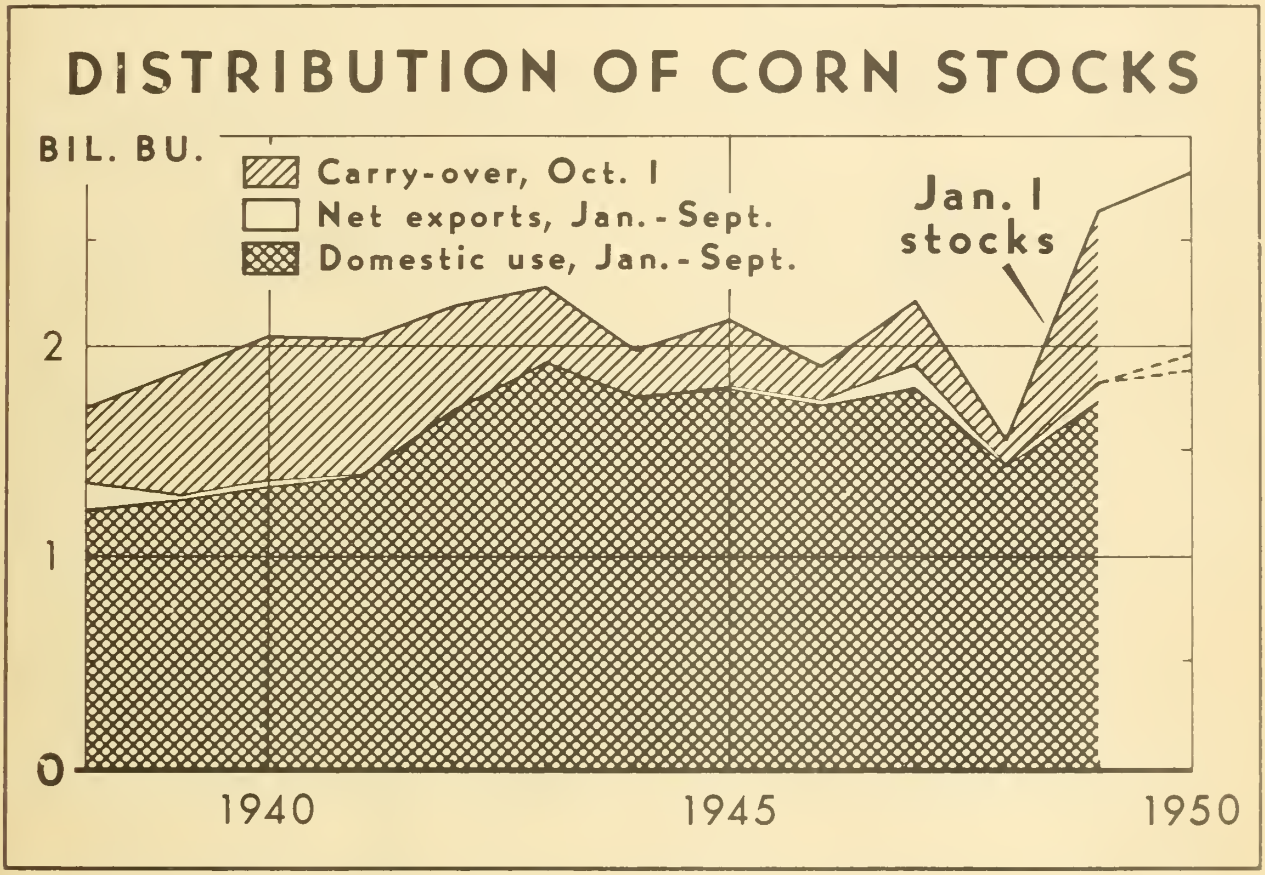

U. S. DEPARTMENT OF AGRICULTURE NEG. 47505-XX BUREAU OF AGRICULTURAL ECONOMICS

Stocks of corn in all positions on January 1 totaled 2,830 million bushels, 189 million bushels larger than the previous record stocks on January 1, 1949. Of this quantity over 300 million bushels were in Government ownership, leaving less corn privately owned than a year ago. Domestic disappearance of corn during January-September 1950 is expected to be larger than in that period of 1949, but the carry-over next October 1 probably will exceed the record carry-over of 825 million bushels in 1949.

Table 1.- Statistical Summary

PRICES

Item	Unit	1947-48		1948-49		1949-50		
		Dec.	Jan.	Dec.	Jan.	Nov.	Dec.	Jan.
		Cents	Cents	Cents	Cents	Cents	Cents	Cents
Corn, No. 3 Yellow, Chicago	Bushel	261.1	271.1	142.4	142.8	115.7	129.6	129.1
Price received by farmers, U. S.	do.	237.0	246.0	123.0	125.0	102.0	113.0	115.0
Oats, No. 3 White, Chicago	do.	127.3	140.1	86.6	81.9	75.9	76.2	74.9
No. 3 White, Minneapolis	do.	124.9	136.2	80.1	76.9	71.1	73.8	72.6
Price received by farmers, U. S.	do.	118.0	127.0	76.5	76.2	66.4	69.9	70.5
Barley, No. 3, Minneapolis	do.	251.0	250.7	134.6	137.5	145.1	141.8	144.4
Price received by farmers, U. S.	do.	200.0	206.0	113.0	115.0	110.0	109.0	110.0
Grain sorghums, price received by farmers, U. S.	100 pounds	361.0	377.0	219.0	222.0	166.0	179.0	189.0
Wheat, No. 2 Hard Winter, Kansas City	Bushel	301.1	303.2	228.7	225.0	220.2	222.1	222.3
		Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Hay, No. 1 Alfalfa, baled, Kansas City	Ton	36.60	36.25	30.00	30.00	29.80	31.00	28.50
Price received by farmers, baled, U. S.	do.	22.70	23.40	23.80	24.70	21.50	21.90	21.90
Byproduct Feeds (bagged)								
Standard bran, Minneapolis	do.	70.90	81.00	50.25	51.00	40.80	44.60	40.70
Buffalo	do.	77.10	87.40	55.00	56.25	47.30	50.60	46.30
Price paid by farmers, U. S.	100 pounds	3.93	4.29	3.18	3.18	2.80	2.92	2.90
Standard middlings, Minneapolis	Ton	74.70	83.75	49.40	49.40	41.00	44.75	40.40
Buffalo	do.	80.10	89.90	55.60	56.25	48.00	51.10	45.40
Price paid by farmers, U. S.	100 pounds	4.29	4.55	3.34	3.31	3.01	3.08	3.02
Cottonseed meal, 41 pct. protein, Memphis	Ton	97.15	97.60	71.10	64.40	61.90	61.30	59.00
Linseed meal, 32 pct. protein, Minneapolis	do.	94.80	113.75	83.00	83.40	70.20	73.10	69.30
30 pct. protein, San Francisco	do.	85.60	93.60	67.60	69.00	59.80	67.75	69.00
Soybean meal, 41 pct. protein, Chicago	do.	101.50	110.25	78.00	73.45	69.40	68.80	65.50
Price paid by farmers, U. S.	100 pounds	5.44	5.82	4.64	4.48	4.36	4.32	4.20
Peanut meal, 45 pct. protein, S. E. milling points	Ton	89.50	94.95	67.40	69.25	59.80	63.10	63.35
White hominy feed, Chicago	do.	96.40	99.50	50.95	50.45	44.95	48.40	46.80
Gluten feed, 23 pct. protein, Chicago	do.	85.20	88.00	58.25	58.25	48.50	51.50	52.50
Tankage digester, 60 pct. protein, Chicago	do.	138.00	150.10	125.20	125.50	123.20	119.75	117.00
Meat scraps, Chicago	do.	124.80	135.10	110.30	111.50	109.00	105.40	105.00
Fish meal, San Francisco	do.	183.60	190.95	164.15	170.00	168.50	189.30	179.90
Alfalfa meal, No. 1 fine, Kansas City	do.	48.50	50.00	40.00	40.00	42.60	41.25	39.00
Mixed dairy feed, 16 pct. protein, price paid by farmers, U. S.	100 pounds	4.57	4.76	3.79	3.76	3.38	3.41	3.42
Laying mash, price paid by farmers, U. S.	do.	5.53	5.74	4.62	4.59	4.38	4.41	4.39
Scratch feed, price paid by farmers, U. S.	do.	5.55	5.69	4.13	4.12	3.68	3.72	3.72

INDEX NUMBERS OF PRICES

		Percent	Percent	Percent	Percent	Percent	Percent	Percent
Feed grains, price received by farmers, U. S. 1/	1910-14=100	347	362	189	191	161	174	177
Ten principal high-protein feeds, terminal markets	1935-39=100	327	344	257	246	231	235	228
Four oilseed meals	do.	321	338	247	230	216	216	209
Tankage, meat scraps, and fish meal	do.	330	352	296	302	297	309	299
Gluten feed, brewers' dried grains, and distillers' dried grains	do.	352	364	254	252	214	225	226
Feed, prices paid by farmers, U. S. 1/	1910-14=100	273	285	220	220	197	201	201

LIVESTOCK-FEED PRICE RATIOS 2/

(Jan. average)								
Hog-corn, Chicago 3/ .... 1929-48 = 12.0	Bushel	10.2	10.0	15.0	13.8	13.9	11.9	12.0
Hog-corn, U. S. farm price ...... 1929-48 = 12.4	do.	10.6	10.8	17.0	16.1	15.3	13.1	13.1
Beef-steer-corn, Chicago 4/ ..... 1929-48 = 14.7	do.	11.1	10.8	18.8	17.1	24.4	20.4	20.1
Butterfat-feed, U. S. .... 1929-48 = 24.7	do.	21.4	20.1	23.0	22.8	25.0	24.3	23.9
Milk-feed, U. S. .... 1929-48 = 1.33	do.	1.18	1.11	1.44	1.34	1.47	1.41	1.36
Egg-feed, U. S. .... 1939-48 = 12.8	do.	12.0	9.6	14.6	13.0	14.2	12.0	9.3

Prices compiled from Chicago Journal of Commerce, Minneapolis Daily Market Record, Kansas City Grain Market Review, and reports of the Grain Branch, Production and Marketing Administration, and the Bureau of Agricultural Economics.

1/ Revised. January 1910 through December 1914 = 100.

2/ Units of corn or other concentrate ration equal in value to 100 pounds of hog or beef-steer, one pound of butterfat or milk, or one dozen eggs.

3/ Revised series, based on packer and shipper purchases of barrows and gilts, and No. 3 Yellow corn. The ratios for the years 1929-37 in the average are based on all purchases of hogs, and No. 3 Yellow corn.

4/ Based on prices of beef-steers sold out of first hands for slaughter, and No. 3 Yellow corn.

THE FEED SITUATION

Approved by the Outlook and Situation Board, February 10, 1950

SUMMARY

The record stocks of feed grains on January 1 are more than adequate for domestic and export requirements during the remainder of the feeding season, and another big carry-over of feed grains is in prospect. Total January 1 stocks of corn, oats, and barley in all positions were estimated at 98 million tons, more than one-third larger than the 1938-42 average, and 3 percent above the previous record stocks of a year earlier. Nearly 16 million tons of the January 1 stocks of these three grains were under loan or in Government ownership. Excluding the quantities held in the loan programs, stocks of these grains were about 10 percent less than a year earlier. Nearly 500 million bushels of the 2,830 million bushels of corn on hand January 1 were under loan or in Government ownership.

The combined disappearance of corn, oats, and barley during October-December was the second largest on record and 12 percent larger than a year earlier, reflecting unusually heavy utilization of corn during the quarter. Continued liberal feeding per head of livestock and greater production of livestock and livestock products was primarily responsible for the heavy utilization of feed grains in the first quarter of this feeding season, although the storm damage to corn fields in the midwest last fall probably caused greater than usual wastage in harvesting and feeding corn. Total domestic use of feed grains during the remainder of the current season (January-September) is expected to be larger than in the same period of 1949, although the increase over corresponding periods of a year earlier probably will not be so great as during the first quarter of the season. Because of an increase in corn, the combined carry-over of corn, oats, and barley at the end of the 1949-50 marketing year probably will be about as large as or a little larger than the record carry-over a year earlier. The corn carry-over next October 1, based on present indications, is expected to be about 10 to 15 percent larger than the carry-over of 825 million bushels last year, while smaller carry-over stocks of oats and barley are in prospect.

Stocks of hay on January 1 were a little larger than a year earlier, and were near record in relation to the number of hay-consuming livestock on farms. Hay stocks were unusually large in areas of the western Corn Belt and in the Southwest, but were below average in the Northeastern States and in a number of other States in the northern part of the country. Mild weather this past fall and early winter resulted in the smallest May-December disappearance of hay in recent years.

Prices of most feeds declined from December to January, and in January feed prices were generally lower than a year earlier. The indexes of prices received by farmers for feed grains and wholesale prices of high-protein feeds both were 7 percent lower. In the first half of

1950 feed grain prices may average somewhere near the average for the first half of 1949. Last year feed grain prices dropped from January to February, and made up only a part of this loss in the following months. The large quantity of feed grains under loan this year and the larger number of livestock on farms will give support to prices of corn and other feeds during the first half of 1950. Late this spring and summer feed grain acreages and prospects for 1950 crops will have an important influence on the level of feed prices. Prices of the lower-protein byproduct feeds may average about as high during the remainder of the 1949-50 feeding season as in that period of 1948-49. Prices of the high-protein feeds, however, probably will average lower than in this period of 1949, when prices of some of these feeds reached record levels.

OUTLOOK AND REVIEW

Record Stocks of Feed Grains Available for the Remainder of the 1949-50 Season

January 1 stocks of corn, oats, and barley in all positions totaled 97.9 million tons, 3 percent larger than the previous record stocks of January 1, 1949. Compared with last year all of the increase was in corn stocks, which totaled 2,830 million bushels, 7 percent larger than a year earlier. Oats stocks, on the other hand, were 10 percent smaller and barley stocks were down 16 percent. Total January 1 stocks of these 3 grains, excluding the quantity under loan or owned by CCC, totaled about 82 million tons, or about 10 percent smaller than the comparable stocks of a year earlier.

Table 2.- Corn, oats, and barley: October-December disappearance and January 1 stocks, average 1937-41, annual 1942-49

Year	Oct.-Dec. domestic disappearance 1/		Stocks January 1 following 2/		Grain-consuming animal units fed annually
	Total	Per animal unit	Total	Per animal unit	
	1,000 tons	Ton	1,000 tons	Ton	Thousands
1937-41 3/	34,907	.23	70,472	.46	153.1
1942	42,174	.22	83,976	.44	192.4
1943	44,962	.23	72,832	.38	193.2
1944	38,711	.22	77,128	.44	173.7
1945	42,587	.25	74,960	.45	167.8
1946	39,764	.25	80,992	.50	161.4
1947	36,297	.23	60,560	.39	155.5
1948	38,084	.24	95,092	.59	161.1
1949 4/	42,857	.26	97,936	.58	168.0

1/ Includes all corn in silage and forage, part of which is consumed after January 1.

2/ Stocks in all positions 1944 to date, farm, terminal market, and Government-owned stocks, 1937-43.

3/ Includes 1939-41 average disappearance of barley.

4/ Preliminary.

Since the number of grain-consuming livestock to be fed during 1949-50 is estimated to be about 4 percent larger than last year, January 1 stocks of the 3 grains are a little smaller per animal unit this year than last. Domestic disappearance of feed grains was unusually heavy during October-December, both per animal unit and in total, reflecting the very heavy utilization of corn. Utilization probably will continue larger than a year ago through the 1949-50 season. The combined carry-over stocks of corn, oats, and barley at the end of the marketing year probably will be as large as or a little larger than the 30 million tons carried over into 1949-50.

Total stocks of corn on January 1 were well above average in all sections of the country. Stocks in the North Central region were the largest on record and about 200 million bushels larger than a year earlier. All of the increase over last year, however, was in off-farm stocks. These stocks totaled 396 million bushels, a large part of which was in Government ownership. Stocks of corn on farms were smaller than on January 1 last year in most of the Corn Belt States, and compared with a year earlier, a larger part was sealed for loan. All of the increase in total corn stocks in Iowa and Illinois and a large part of the increase in Minnesota and Nebraska is accounted for by the increase in stocks in off-farm positions.

Stocks of oats and barley in all positions were close to the average of the past 5 years, but oats stocks were 10 percent smaller and barley stocks were 16 percent smaller than a year earlier. Total off-farm stocks of these grains, however, were larger than a year earlier, and all of the decrease was in stocks on farms. (See table 4.) Stocks of sorghum grains in all positions totaled 111,585,000 bushels, 31 percent above the big stocks of a year earlier.

Large Quantities of Feed Grains Held Under Government Loan Programs

Large quantities of feed grains have been placed under loan from the big 1948 and 1949 crops. On January 1, 1950, a record total of about 17.0 million tons of the 4 feed grains were held under loan or in Government ownership. Of this quantity nearly 10 million tons were in Government ownership. The remainder was under loan, from the 1948 and 1949 crops.

Of the 2,830 million bushels of corn on hand January 1, it is estimated that 484 million bushels were under loan or in Government ownership (not including 1949 corn designated for purchase agreement). Of this quantity, about 305 million bushels were owned by the CCC. About 275 million bushels of this were held in Government-owned bins and warehouses, and most of the remainder in terminal, subterminal, or country elevators and warehouses. Excluding the total quantity of corn under loan or in Government ownership from the total January 1 stocks of 2,830 million bushels leaves 2,346 million bushels of other corn. This was about 200 million bushels less than the 1949 stocks, after allowance is made for the 85 million bushels that had been placed under loan through December 1948. (See table 4.) Of the 2,401 million bushels of corn on farms January 1, 178 million bushels were sealed for loans. This left 2,223 million bushels on farms not under loan, 240 million bushels less than a year earlier.

Table 3.- Corn: Stocks January 1, by States and regions, average 1944-48, annual 1949 and 1950

Region and State	Average 1944-48			1949			1950					
							Farm stocks					
	Farm stocks	Off-farm stocks	Total stocks	Farm stocks 1/	Off-farm stocks	Total stocks	1948 corn resealed	1949 corn under loan	Unsealed corn 2/	Total	Off-farm stocks	Total stocks
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
N. Atl.	41.7	3.2	44.9	55.2	3/ 9.9	65.1	*	.1	52.5	52.6	10.4	63.0
Ohio	107.7	2.6	110.3	153.8	4.6	158.4	.1	4.4	134.8	139.3	10.7	150.0
Ind.	147.3	2.9	150.2	215.5	4.4	219.9	.2	4.3	177.1	181.6	21.2	202.8
Ill.	292.6	12.4	305.0	421.1	22.1	443.2	7.2	12.0	369.8	389.0	88.7	477.7
Mich.	31.3	.7	32.0	43.5	3/	43.5	*	.9	58.1	59.0	1.5	60.5
Wis.	40.6	.6	41.2	42.7	4.9	47.6	.1	.7	56.7	57.5	3.1	60.6
E.N. Cent.	619.5	19.2	638.7	876.6	36.0	912.6	7.6	22.3	796.5	826.4	125.2	951.6
Minn.	122.2	3.8	126.0	177.4	8.3	185.7	10.2	8.3	162.9	181.4	39.8	221.2
Iowa	377.4	6.0	383.4	500.0	7.9	507.9	54.7	35.6	377.6	467.9	133.7	601.6
Mo.	93.2	4.9	98.1	143.2	7.5	155.7	1.6	4.5	122.2	128.3	16.0	144.3
N. Dak.	5.2	.2	5.4	8.2	.3	8.5	.3	1.0	5.8	7.1	1.6	8.7
S. Dak.	64.7	1.5	66.2	88.5	1.1	89.6	5.8	4.5	50.0	60.3	26.9	87.2
Nebr.	165.2	6.1	171.3	191.2	4.3	195.5	*	14.7	180.3	195.0	44.5	239.5
Kans.	39.0	1.7	40.7	52.0	2.3	54.3	.7	3.2	39.4	43.3	8.4	51.7
W.N. Cent.	866.9	24.2	891.1	1,165.5	31.7	1,197.2	73.3	71.8	938.2	1,083.3	270.9	1,354.2
Total N. Cent.	1,486.4	43.4	1,529.8	2,042.1	67.7	2,109.8	80.9	94.1	1,734.7	1,909.7	396.1	2,305.8
S. Atl.	142.3	2.2	144.5	164.9	5.3	170.2	*	.9	172.7	173.6	6.4	180.0
S. Cent.	217.9	4.4	222.3	275.9	6.8	282.7	*	1.6	250.2	251.8	7.7	259.5
West.	12.0	1.9	13.9	9.8	2.2	13.5	*	.1	13.5	13.6	5.3	21.4
Total U. S.	1,900.3	55.1	1,955.4	2,547.9	3/ 93.4	2,641.3	80.9	96.8	2,223.6	2,401.3	4/ 428.4	2,829.7

1/ Includes 84.9 million bushels of corn under loan and 10.1 million bushels under purchase agreement.

2/ Includes 6.0 million bushels of corn under purchase agreement.

3/ The United States total includes 1.5 million bushels of off-farm stocks located in New England and Michigan unallocated by States.

4/ Includes 2.5 million bushels unallocated by States.

* Less than 50,000 bushels.

Table 4.- Feed grains: January 1 stocks by position and ownership, United States, 1949 and 1950

Item	Corn		Oats		Barley		Sorghum grains	
	1949	1950	1949	1950	1949	1950	1949	1950
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
Farm stocks								
Old grain resealed	*	81	*	2	*	2	0	0
New crop grain sealed	85	97	1/ 13	24	1/22	15	2	6
All other 2/ 3/	2,463	2,223	916	794	134	91	50	54
Total	2,548	2,401	929	820	156	108	52	60
Off farm stocks								
Owned by CCC	*	4/305	*	14	*	4/28	*	9
Under loan in warehouses	*	1	1/ 2	4	1/ 9	11	17	33
All other 2/	93	123	44	38	66	48	16	10
Total	93	429	46	56	75	87	33	52
Total stocks in all positions	2,641	2,830	975	876	231	195	85	112

1/ Total for season, loan period ended December 31.
2/ Residual.
3/ Includes grain under purchase agreement.
4/ Includes 2 million bushels of corn and 2 million bushels of barley stored in Canada.
*Less than 500,000 bushels.

Corn prices have been considerably below the loan rate since the harvesting of the 1949 crop and farmers had placed 98 million bushels under loan and 6 million under purchase agreement through December. The smaller quantity of unsealed corn on farms January 1 this year than last, accompanied by a larger livestock population, indicates that a smaller total quantity of 1949 corn may be placed under price support than the total of 554 million bushels in 1948-49.

Even though total stocks of oats were smaller than a year ago, a larger quantity was held under the price support program. Through December farmers had placed 27.6 million bushels of oats under loan, the largest on record, and about double that of a year earlier. In addition about 3.0 million bushels were placed under purchase agreement. The total quantity of oats under loan and owned by the CCC on January 1, including both old and new crop oats, was estimated at 44 million bushels, about 5 percent of the total January 1 stocks.

The quantity of 1949 barley placed under price support through December this year totaled 27.9 million bushels, including 26.3 million under loan and 1.6 under purchase agreement. This is considerably smaller than the total of 49.5 million bushels placed under price support from the 1948 crop. On January 1 a total of about 56 million bushels of barley was held under loan or in CCC ownership, over one-fourth of the total January 1 stocks.

Farmers had placed a record large quantity of sorghum grains under loan through December this year, a total of about 39.1 million bushels. In the 1948-49 season farmers placed a total of 34.7 million bushels of sorghum grains under loan and 5.1 million bushels under purchase agreement. The bulk of this grain was delivered to the Government in the spring and summer of 1949. Most of this old crop of sorghum grains has been sold by CCC and only 9 million bushels remained in CCC ownership on January 1. This, plus the 39 million bushels of 1949 sorghum grains sealed for loan, gave a total of 48 million bushels of sorghum grains under loan and owned by CCC on January 1, or about 43 percent of the total January 1 stocks.

Heavy Utilization of Feed Grains Indicated for the 1949-50 Season

The combined domestic utilization of corn, oats, and barley during October-December was the second largest on record, 12 percent larger than in the same quarter of 1948. Largely responsible for this heavy disappearance was the large quantity of corn consumed in this country, which was second only to utilization in that quarter of 1943, when livestock numbers were much larger. This rapid disappearance of feed grains reflects the larger number of livestock on farms and liberal feeding per animal.

The October-December domestic disappearance of corn for all purposes is estimated at 1,335 million bushels, 16 percent larger than the disappearance in that quarter of 1948 and 8 percent above the 1943-47 average disappearance for the quarter. This estimate of disappearance is based on the total corn supply and includes corn used in silage and forage, part of which is consumed after January 1. The estimated October-December domestic disappearance of corn harvested as grain is 1,066 million bushels, about 200 million bushels more than in the same quarter of 1948. During the remainder of the 1949-50 feeding season, January-September, domestic utilization of corn probably will be moderately larger than in the same period of 1949. The increase from a year earlier during the last nine months of the marketing year, however, is not expected to be as large as the increase in the first quarter. In 1948-49 livestock numbers were at a comparatively low level at the beginning of the feeding year, and hogs and poultry increased during the year. This year livestock numbers were larger than a year earlier at the beginning of the season but probably will not show the same percentage increase over those of a year earlier during the remainder of the season. The heavy corn utilization in the last quarter of 1949 also reflects heavy feeding of hogs and probably more than usual wastage of corn due to storm damage to corn fields. Assuming around 5 percent greater domestic utilization of corn in January-September this year than last, a carry-over of around 10 to 15 percent more corn is in prospect next October than the 825 million bushels carried over in 1949.

Table 5 .- Domestic disappearance of feed grains and estimated quantities of wheat and rye fed, United States, average 1943-47, annual 1946-49

Year beginning October	October-December 1/	January-March	April-June	July-September	Total October-September
	Million bushels	Million bushels	Million bushels	Million bushels	Million bushels
			Corn		
Average 1943-47	1,235	784	534	377	2,930
1946	1,212	813	577	407	3,009
1947	1,111	671	426	327	2,535
1948	1,147	741	538	443	2,869
1949	2/1,335				
			Oats		
Average 1943-47	260	359	275	445	1,339
1946	271	363	286	445	1,365
1947	241	343	244	424	1,252
1948	278	366	308	481	1,433
1949	2/ 258				
			Barley		
Average 1943-47	72	73	57	87	288
1946	62	59	48	74	243
1947	55	70	62	65	252
1948	64	64	59	80	267
1949	2/ 57				
			Wheat		
Average 1943-47	61	95	40	70	266
1946	46	3/	3/	40	163
1947	22	87	38	51	198
1948	11	39	30	42	122
1949	2/ 18				
			Rye		
Average 1943-47	2	3	2	5	12
1946	1	1	4/	1	3
1947	2	1	1	1	5
1948	1	2	1	2	6
1949	2/ 1				
			Total (million tons)		
Average 1943-47	42.3	32.4	22.0	22.0	118.7
1946	41.2	32.3	21.9	21.5	116.9
1947	37.0	28.6	18.5	19.0	103.1
1948	38.4	29.4	22.3	23.4	113.5
1949	2/ 43.3				

1/ Includes all corn in silage, part of which is consumed after January 1.
2/ Preliminary.
3/ Total wheat fed during January-June estimated to be 77 million bushels.
4/ Less than 500,000 bushels.

The October-December disappearance of oats and barley in 1949 was smaller than in that quarter of 1948. During the first half of the 1949-50 oat marketing year (July-December), however, domestic utilization of oats was 5 percent larger than in the same period of 1948. Total utilization of oats for the entire 1949-50 marketing year probably will be at least as large as in 1948-49, and the carry-over next July 1 somewhat smaller than the record carry-over of last July 1. Domestic disappearance of barley in the first half of the current marketing year was a little larger than that of a year earlier. With smaller stocks on hand this January 1 than last, barley utilization in January-June this year probably will be below that in the first half of 1949, and the carry-over of barley next July 1 around one-fourth smaller than the big carry-over on July 1, 1949.

Byproduct Feed Production Continues Large in 1949-50 Season

Production of byproduct feeds in the first quarter of the current feeding season totaled a little larger than a year earlier, principally as a result of the heavy output of oilseed cakes and meals. The total production of oilseed cake and meal in the 1949-50 feeding season is expected to exceed the record production in 1948-49, and probably more will be available for livestock feeding. Wheat millfeed production, on the other hand, has been declining in recent years, and is expected to be smaller in 1949-50 than in the past feeding season. Production of most of the other byproduct feeds is expected to continue near the level of the past year. The total supply of byproduct feeds available for livestock feeding in the 1949-50 season is expected to be about as large as the record total of 19.6 million tons in 1948-49. As compared with last year, the total volume of high-protein feed is expected to be larger, but a little less is in prospect in relation to the increased number of livestock on farms.

In the first quarter of the current feeding season (October-December) the production of oilseed cake and meal totaled 2,513,000 tons, or about 11 percent larger than in the same quarter of 1948. Total production of oilseed cake and meal for the 1949-50 season probably will exceed the record production of 7,643,000 tons in 1948-49. In the 1948-49 season 347,000 tons of oilseed cake and meal were exported, the largest in recent years. Exports are expected to continue large in 1949-50, but may not be quite so high as in the past feeding season.

Total production of wheat millfeeds in October-December is estimated at 1,194,000 tons, or about 11 percent smaller than a year earlier, and probably will be down 5 to 10 percent for the entire 1949-50 season. Production of gluten feed and meal in October-December totaled 223,000 tons, slightly smaller than in the same quarter of a year earlier. The total production of gluten feed and meal in the current feeding season is expected to be somewhere near the 848,000 tons produced in 1948-49. Production of brewers' dried grains also is expected to total about as large this season as last. Production of distillers' dried grains was one-third smaller in October-December 1949 than a year earlier, and probably will total less for the entire 1949-50 season than in 1948-49.

Table 6 .- Production and stocks of specified byproduct feeds, December 1949 with comparisons

Item	1948-49	1948	1949			
	Oct.- Sept.	Oct.- Dec.	October	November	December	Total
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
Production						
Cottonseed cake and meal	2,416.3	941.7	334.0	355.1	309.8	998.9
Soybean cake and meal	4,328.2	1,104.6	414.5	406.4	407.2	1,228.1
Linseed cake and meal	686.8	163.1	65.0	60.5	59.6	185.1
Peanut cake and meal	93.7	31.2	15.6	22.8	19.7	58.1
Copra cake and meal	118.0	27.3	15.8	15.1	12.0	42.9
Corn gluten feed and meal	848.3	229.4	81.2	72.8	69.3	223.3
Brewers' dried grains	232.4	50.6	16.8	14.5	16.2	47.5
Distillers' dried grains	332.9	110.9	22.1	24.0	27.4	73.5
Wheat millfeeds	4,799.2	1,335.0	424.9	389.3	1/ 380.0	1/1,194.2
Rice millfeeds	190.3	74.8	31.9	24.2	23.1	79.2
Alfalfa meal	957.0	170.5	86.0	55.7	38.6	180.3
Fish cake and meal	173.9	39.9	31.8	10.6	13.9	56.3
Dry or powdered skim milk	10.0	1.1	.6	.4	.5	1.5
Tankage and meat scraps 2/	775.8	202.1	63.4	65.3	67.1	195.8
Stocks end of period						
Cottonseed cake and meal	98.1	81.5	116.9	123.5	142.8	
Soybean cake and meal	13.3	---	35.9	42.5	47.4	
Linseed cake and meal	38.6	---	32.2	17.9	14.8	
Peanut cake and meal	1.1	3.0	2.8	4.2	6.1	
Copra cake and meal	7.3	---	7.4	6.0	3.7	
Brewers' dried grains	6.0	1.6	4.3	3.4	3.5	
Distillers' dried grains	2.2	4.2	1.9	2.1	2.6	
Alfalfa meal	186.2	153.5	193.8	185.1	156.2	

Compiled as follows: Wheat millfeeds, cottonseed cake and meal, and beginning January 1949, soybean, linseed, and copra cakes and meals, Bureau of the Census; prior to January 1949, soybean, linseed, and copra cakes and meals, Grain Branch, Production and Marketing Administration, derived from Census crushings report; gluten feed and meal, brewers' and distillers' dried grains, rice millfeeds, and alfalfa meal, Production and Marketing Administration, fish cake and meal from Fish and Wildlife Service, Department of the Interior.

1/ Preliminary.

2/ Reported production, which is estimated to be about 95 percent of the total United States production.

Hay Stocks on January 1 Larger Than a Year Earlier; May-December Disappearance Slightly Smaller

Stocks of hay remaining on farms on January 1 totaled 69.2 million tons, 3 percent larger than on that date last year, but a little smaller than in other recent years. In relation to the number of hay-consuming livestock to be fed, which have declined considerably since the war years, January 1 stocks slightly exceeded the record stocks per animal unit of 2 years ago. The total disappearance of 45.2 million tons of hay during May-December 1949 was a little smaller than last year, both in total and in relation to the number of livestock on farms, but was above the 1940-44 average.

While stocks of hay for the country as a whole were larger in relation to the number of livestock on farms, there are rather wide differences in the quantities available by regions. Stocks of hay on January 1 were unusually large in the central and western sections of the Corn Belt, and in the southwest. In the northeastern States from Michigan and Ohio to New England, hay stocks were much smaller than a year ago, and in most of these States below average. They also were below average in the 3 Pacific Coast States and in North Dakota and Minnesota. In the Rocky Mountain region, where hay supplies were short last year, supplies were considerably larger this year, and were generally adequate for livestock to be fed in this area.

Feed Prices Expected to Average Close to the Level of a Year Earlier in First Half of 1950

Prices of grains and a number of the byproduct feeds declined from December to January, but prices of most feeds remained higher than the low points reached in the last half of 1949. Prices of most feeds in January were lower than a year earlier. The indexes of prices of feed grains and high-protein feeds were both about 7 percent lower. In the first half of 1950 the general level of feed prices may average close to the average for the first half of 1949. Last year prices of feed grains and many of the byproduct feeds dropped sharply from January to February, then regained part of this loss in the months that followed.

The average price received by farmers for corn in January was $1.15 per bushel, 10 cents per bushel lower than a year earlier and 25 cents per bushel below the national average loan rate on corn. The large quantity of 1949 corn going under loan and the large amount of 1948 corn held in Government ownership indicates that the corn supply situation may be somewhat tighter in the first half of 1950 than in 1949. The corn price-support program and the larger number of livestock on farms than a year ago will tend to support corn prices during the next few months. Late this spring and next summer, prices of corn and other feeds will be influenced to a considerable extent by 1950 acreages planted and by prospects for production of corn and other feed crops.

Table 7.- Hay: Supply, May-December disappearance, and stocks January 1, average 1940-44, annual 1945-49

Year beginning May	Hay supply May 1 1/	May-December disappearance	Stocks on farms January 1 following	Roughage-consuming animal units fed annually 2/	May-December disappearance per animal unit	January 1 stocks per animal unit
	1,000 tons	1,000 tons	1,000 tons	Thousand	Ton	Ton
Average 1940-44	115,183	44,978	70,205	76,850	.59	.91
1945	124,431	50,239	74,192	75,347	.67	.98
1946	121,346	51,671	69,675	72,822	.71	.96
1947	118,739	48,962	69,777	69,424	.71	1.01
1948	114,599	47,403	67,196	68,444	.69	.98
1949	114,403	45,218	69,185	3/68,100	3/.66	3/1.02

1/ Production plus farm stocks on May 1.
2/ Weights for roughage-consuming animal units fed annually shown in table 9, October 1949 Feed Situation.
3/ Preliminary estimate.

Table 8.- Hay: January 1 farm stocks, by regions, average 1941-45, annual 1946-50

Region	Average 1941-45	1946	1947	1948	1949	1950 1/
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons	1,000 tons
North Atlantic	8,800	10,002	9,810	9,677	9,298	8,038
East North Central	15,294	15,865	14,597	14,822	13,039	13,635
West North Central	21,813	22,657	20,557	21,328	20,425	22,078
South Atlantic	3,870	4,547	4,414	3,779	4,450	4,580
South Central	7,548	8,222	8,067	7,367	7,745	8,435
Western	12,880	12,899	12,230	12,804	12,239	12,419
Total United States	70,205	74,192	69,675	69,777	67,196	69,185

1/ Preliminary.

Prices of most of the byproduct feeds declined from December to January. In January prices of most of these feeds were a little lower than a year earlier. Prices of the lower-protein feeds, which are influenced to a considerable extent by the level of feed grain prices, probably will average close to the level of a year earlier during the first half of 1950. During the first few months of 1950 prices of high-protein feeds also may be somewhere near the level for those months of 1949. But this summer prices of high-protein feeds are not expected to average as high as in the summer of 1949. Last summer prices of animal protein feeds were influenced by relatively short supplies and a strong demand from poultry and hog producers. A number of the high-protein feeds reached record highs.

Livestock-feed price ratios, which were generally favorable to livestock producers during much of the 1948-49 feeding season, turned less favorable during the past few months. The hog-corn price ratio, based on average prices received by farmers, was 13.1 in mid-January, a little above the long-time average, but lower than the very favorable ratio of a year earlier. The milk-feed price ratio was a little above average in January, but it also was lower than a year ago. Because of the much greater decline in prices of eggs and chickens than in the price of poultry feeds, the egg-feed price and the chicken-feed price ratios in January were much lower than a year ago and well below average. Livestock-feed price ratios are expected to continue less favorable to livestock and poultry producers during the remainder of the 1949-50 season than in the same period of 1948-49, reflecting the somewhat lower level of prices in prospect for most types of livestock and livestock products, compared with a year earlier.

Table 9.- Feed grains: Receipts at primary markets, January, average 1944-48 and 1949, October 1949-January 1950

Item	January		1949-50			
	Average 1944-48	1949	October	November	December	January
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
Corn, 12 markets 1/	39,540	38,281	43,927	58,979	33,368	25,182
Oats, 12 markets 1/	12,327	9,321	5,954	5,460	7,163	6,989
Barley, 4 markets 2/	8,235	8,323	11,003	9,015	6,820	4,351

1/ Chicago, Milwaukee, Minneapolis, Duluth, St. Louis, Kansas City, Peoria, Omaha, Indianapolis, Sioux City, St. Joseph, and Wichita.
2/ Minneapolis, Milwaukee, Chicago, and Duluth.

THE RELATION OF CORN PRICES TO PRICES OF OTHER FEEDS 1/

In making feed and livestock price comparisons there is frequently a need for the average of past relationships between the prices of various feeds. Such relationships are especially helpful to technicians in estimating the approximate level of prices of certain feeds when prices of one or more of the other feeds are known, or have been independently estimated--provided they are used with full recognition of their limitations.

In this article the prices of a number of commonly used feeds are related to the price of corn to determine the average relationships for the period 1926-49. Corn has been selected as the basic feed in the comparisons, since corn is by far the most important livestock feed in this country, making up more than one-half of all feed concentrates fed to livestock and poultry.

The price comparisons set forth in table 10 indicate the general level of prices of a number of other feeds when corn prices were at the values specified. The data reflect only the historical relationships that existed between the calendar year average prices of corn and the other feeds during the 20 years 1926-49, excluding the years 1943-46, when price ceilings were in effect. The national average farm price of corn has been related to the national average farm prices of feed grains and hay, and to the central wholesale market prices of byproduct feeds. Production of the other feed grains and hay is concentrated in somewhat different areas from that of corn. Consequently the data reflect geographical differences in prices of these feeds as compared with corn prices, and also differences in location of the central markets at which prices of the various byproduct feeds are quoted. The comparisons in table 10 are based on simple averages of calendar year prices, and do not allow for seasonal variation that occurs during the year. For this reason, price comparisons at certain months during the year will, on an average, deviate from these relationships to the extent that there are differences in seasonal variation between the prices of the various feeds. The price comparisons shown are the computed average relationships that prevailed under the conditions of the 20-years. They are not intended to indicate relative feeding values.

The time period used in this study provided a wide range of price variation for all feeds. The price of corn varied from a low annual average of 28 cents per bushel in 1932 to a high of $1.88 per bushel in 1948. There were comparable variations in prices of other feeds, although for a number of the feeds the percentage variation was less than for corn. Since prices of feeds during the years 1943-46 were under price control and most feeds during much of this period were stabilized at the ceiling levels, these years were omitted in making the determinations.

The table was designed to permit quick comparisons between prices. Thus it shows the prices of other feeds that corresponded during the period of study to corn prices spaced at 10-cent intervals between 50 cents and $1.60. Since the comparisons are based on simple linear relationships of prices during the period, they do not allow for special circumstances in some years which cause the prices to deviate from the average relationships.

1/ This article uses information developed in a study now in progress of factors affecting consumption, uses, and price of corn and other feeds, financed by Research Marketing Act funds.

Table 10.- The relation of corn prices to those of other commonly-used feeds during 1926-49 1/

Feed	Unit	Price of related feeds when the average price per bushel received by farmers for corn in the United States												Coefficient of determination 2/
		$.50	$.60	$.70	$.80	$.90	$1.00	$1.10	$1.20	$1.30	$1.40	$1.50	$1.60	
		Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.	
Grains														
Oats, U. S. average	Bushel	.28	.33	.38	.43	.48	.52	.57	.62	.67	.72	.76	.81	.958
Barley, U. S. average	Bushel	.38	.46	.55	.63	.71	.79	.88	.96	1.04	1.12	1.21	1.29	.957
Sorghum grains, U. S. average	100 lb.	.85	1.00	1.14	1.29	1.43	1.58	1.72	1.87	2.01	2.16	2.30	2.45	.962
Wheat, U. S. average	Bushel	.68	.80	.92	1.04	1.16	1.28	1.40	1.52	1.64	1.75	1.87	1.99	.882
Rye, U. S. average	Bushel	.41	.53	.65	.76	.88	1.00	1.12	1.24	1.36	1.48	1.60	1.71	.905
Byproduct feeds (bagged)														
Standard bran, Minneapolis	Ton	17.00	20.00	23.00	26.00	29.00	32.00	35.10	38.10	41.10	44.10	47.10	50.10	.917
Standard middlings, Minneapolis	Ton	17.40	20.70	24.10	27.40	30.70	34.00	37.30	40.70	44.00	47.30	50.60	54.00	.936
Cottonseed meal, 41 pct. protein, Memphis	Ton	22.60	26.70	30.80	34.90	39.10	43.20	47.30	51.40	55.50	59.60	63.80	67.90	.921
Linseed meal, 32 pct. protein, Minneapolis	Ton	32.40	35.90	39.50	43.00	46.60	50.10	53.70	57.20	60.80	64.30	67.90	71.50	.842
Soybean meal, 41 pct. protein, Chicago	Ton	28.50	32.70	37.00	41.20	45.40	49.70	53.90	58.10	62.40	66.60	70.80	75.10	.886
Peanut meal, 45 pct. protein, S. E. milling points	Ton	25.70	29.60	33.50	37.40	41.30	45.20	49.10	53.00	56.90	60.80	64.70	68.60	.871
White hominy feed, Chicago	Ton	20.90	24.70	28.40	32.20	36.00	39.70	43.50	47.20	51.00	54.80	58.50	62.30	.990
Gluten feed, 23 pct. protein, Chicago	Ton	20.90	24.40	27.80	31.20	34.60	38.10	41.50	44.90	48.40	51.80	55.20	58.60	.933
Tankage digester, 60 pct. protein, Chicago	Ton	44.60	50.40	56.10	61.90	67.70	73.40	79.20	85.00	90.80	96.50	102.30	108.10	.750
Meat scraps, Chicago	Ton	47.00	51.70	56.40	61.20	65.90	70.60	75.40	80.10	84.80	89.50	94.30	99.00	.660
Fish meal, 67 pct. protein, San Francisco	Ton	40.60	50.20	59.70	69.20	78.80	88.30	97.80	107.40	116.90	126.40	136.00	145.50	.585
Alfalfa meal, No. 1 fine, Kansas City	Ton	20.70	22.30	24.00	25.50	27.10	28.70	30.30	31.90	33.50	35.10	36.70	38.30	.814
Dairy and Poultry Rations														
Rations fed to milk cows on farms where whole milk is sold 3/	100 lb.	1.31	1.50	1.69	1.87	2.06	2.24	2.43	2.62	2.80	2.99	3.17	3.36	.937
Rations fed to milk cows on farms where cream is sold 3/	100 lb.	1.05	1.23	1.41	1.58	1.76	1.94	2.11	2.29	2.47	2.64	2.82	3.00	.962
Average ration fed to poultry 3/	100 lb.	1.53	1.75	1.98	2.20	2.42	2.64	2.87	3.09	3.31	3.53	3.76	3.98	.943
Laying mash 4/	100 lb.	2.13	2.35	2.57	2.79	3.01	3.23	3.45	3.67	3.89	4.10	4.32	4.54	.887
Scratch feed 4/	100 lb.	1.66	1.89	2.12	2.36	2.59	2.82	3.05	3.28	3.52	3.75	3.98	4.21	.942
Hay														
All hay, loose, U. S. average 5/	Ton	8.60	9.30	10.00	10.80	11.50	12.20	12.90	13.70	14.40	15.10	15.90	16.60	.758
Alfalfa hay, loose, U. S. average 5/	Ton	9.50	10.40	11.30	12.10	13.00	13.90	14.70	15.60	16.40	17.30	18.20	19.00	.822

1/ The data in this table were obtained from simple correlations between calendar year average prices of various feeds, and calendar year average prices received by farmers in the United States for corn. The prices shown in the body of the table are the average price for the feed which prevailed during the period when the price of corn was at the various levels indicated. The years 1943-46, when maximum price regulations were in force, were excluded in determining the average relationships. Prices of some of the feeds were not available for the entire period, and the comparisons are based on a shorter period. These are: soybean meal, beginning in 1930, and alfalfa meal, meat scraps, and fish meal beginning 1935. 2/ The correlation coefficient squared after adjustment for size of sample. 3/ United States average cost of rations; includes both home grown grains and purchased feeds. 4/ Average prices paid by farmers in the United States. 5/ Baled hay prices, currently reported in Agricultural Prices, average about 125 percent of loose hay prices.

Higher coefficients of determination 1/ than those shown in table 10 would have been obtained for many of the feeds if the variations in supplies of the feeds relative to the corn supply were considered, in addition to the level of corn prices. If allowance were also made for particular demand factors, which influence prices of some of these feeds differently than for corn, more of the variation between corn prices and the other feeds would have been explained.

These comparisons indicate that prices of some feeds have followed rather closely the movement of corn prices, while prices of others have been only generally associated with the price of corn. The closeness of the association of the various feed prices with corn prices is indicated by the coefficients of determination shown in the last column of table 10. This measure of relative association indicates a rather close association between corn prices and prices of other feed grains and the lower-protein byproduct feeds, but less association between prices of corn and the high-protein feeds and hay.

The coefficients, computed on the basis of calendar year average prices of the various feeds, are influenced by the general tendency of all feed prices to move together and by the wide changes in the demand for feed over the period. The much higher level of feed prices in the period 1947-49 than in 1931-33 was associated with comparable changes in prices of livestock, livestock products, and other agricultural commodities from the depression period to the postwar prosperity period. The wide range over which prices were compared made possible reasonably accurate estimates of average relationships between most of these feeds and corn. If a period has been selected in which changes in demand were less pronounced, the coefficients of determination would have been lower, but the range over which prices were compared would have been narrower, and the estimates of comparable feed prices would have been less reliable at the extremes of the range. 2/

There are a number of factors which are basic to the general tendency of feed prices to move together. Probably the most important of these is the fact that the various feeds compete with one another in the market. If one feed ingredient becomes relatively high, feeders and feed manufacturers tend to shift to less expensive feeds, which in turn brings about price adjustments among the various feeds. This is largely responsible for the

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1/ The coefficients indicate the closeness of the association between changes in corn prices and prices of the other feeds. A coefficient of 1.00 indicates perfect correlation, while 0.0 indicates no correlation. The coefficient also indicates the percentage of the variation in prices of the other feeds that is related to variation in corn prices. A coefficient of .50 indicates that 50 percent of the variation is related to corn price variations, a coefficient of .75 indicates that 75 percent of the variation is related to corn price variation, etc.

2/ The wide range of prices in the years selected was a factor contributing to the high coefficients of determination, which were obtained for many of the feeds. Lower coefficients would have resulted if a period were selected in which there was less change in the level of feed prices. For example, the coefficient of determination for oats when computed for the period 1926-42 was .804 instead of .958 for the 20 years shown in table 10. The standard error of estimate, in cents per bushel, however, was about the same on the basis of this shorter period as for the full 20 years.

close association between the prices of corn and other feed grains and the lower-protein byproduct feeds, such as wheat millfeeds and hominy feed, which may be substituted for corn.

Another reason for the general association of the various feed prices is that all the feed prices are influenced by the same general changes in national demand. Changing levels of consumer income and demand for livestock products are in turn reflected in changes in the over-all demand for feeds, although some feeds may be more sensitive to these changes than others. Also increasing or decreasing livestock numbers in general have an over-all influence on the demand for feed, although here again changes in numbers of particular kinds of livestock may influence prices of some feeds more than others.

A third reason for this tendency of feed prices to follow a similar pattern is that production and, in turn, supplies of many of the feeds are affected by the growing season and consequently tend to vary together. An unfavorable growing season due to drought usually reduces the output of all feed grains and hay. It may also influence the volume of grains, oilseeds, and some other crops processed and the output of the byproduct feeds of these products.

As mentioned previously, prices of oats, barley, and sorghum grains were rather closely related to corn prices during the 20 years, since these feeds may be interchanged to a considerable extent in livestock rations. Wheat middlings, hominy feed, and some other lower-protein byproduct feeds also have about the same feeding value as corn, and their prices were closely related to corn prices.

Prices of wheat and rye are much less closely associated with corn prices than the other grains mentioned above. Since these grains are primarily food grains, their prices are influenced to a considerable extent by factors apart from those influencing prices of the feed grains. As large quantities of wheat are exported, the export market in many years of this period materially influenced domestic wheat prices. Only in years when there are large domestic surpluses of wheat, and wheat is used extensively for feed, does the price of wheat drop to a level that makes wheat generally competitive with corn as a feed. Loan rates on wheat, which have influenced wheat prices in many of the years since 1938, also have tended to maintain wheat prices at a higher level than corn.

In general, byproduct feeds, which are less comparable with corn in their physical composition, bear less price association with corn. Oilseed meal prices are not so closely related to corn prices as are the prices of hominy feed and wheat middlings, but they are more closely associated than the animal protein feeds.

Major swings in the general price level over the 20 years were responsible for much of the association between the price of corn and prices of high-protein feeds, such as tankage, meat scraps, and fish meal. In periods when the general price level is fairly stable, prices of corn and the animal protein feeds show much less association. When the prices of corn and the animal protein feeds are compared on the basis of their changes from one year to the next, a type of comparison which materially reduces the influence of wide changes in demand occurring over a period of years, the coefficient of determination is much lower. For illustration, the coefficient computed on the basis of the year to year changes in prices of corn and tankage for the period 1926-42 was only .331 and was even lower when computed for the entire 20 years. The year to year changes in prices of the lower-protein feeds, on the other hand, tend to follow more closely the year to year changes in corn prices. The coefficient of determination for oats prices as related to corn prices, based on the year to year changes, was .873, only moderately lower than the coefficient of .958 shown in table 10. The coefficients for the other feed grains and the lower-protein byproduct feeds computed in this manner were comparably high, indicating a fairly close association between year to year changes in the prices of these feeds and corn.

Prices of the three other feed grains and of the lower-protein byproduct feeds are depressed along with corn prices when a bumper corn crop is produced, and advance with corn prices when the corn crop is short. Prices of tankage, meat scraps, and fish meal, on the other hand, are not influenced as much by changes in corn supplies. They become cheap relative to corn when corn prices advance as a result of short crops, and high relative to corn when corn prices are depressed by large crops. This may be attributed largely to the fact that the high-protein feeds are used for the most part as supplements to corn in livestock rations, and not as substitutes, as are other feed grains and lower-protein byproduct feeds. For this reason there is a tendency for a large corn supply, which is usually followed by an expansion in livestock production, to be accompanied by an increase in requirements of protein feeds.

Furthermore, the demand for the animal and marine proteins is more restricted than for corn, since they are consumed nearly entirely by hogs and poultry. Under certain conditions, prices of these may become unusually high or low relative to corn prices. For illustration, prices of tankage, meat scraps, and fish meal advanced to record or near-record levels in the summer of 1949, while corn prices dropped about 50 percent from the record level reached early in 1948. In 1949 hog and poultry numbers were increasing rapidly, and corn supplies from the 1948 crop were at a record high.

The average cost of dairy rations fed to milk cows in areas where most of the milk is produced for sale as cream, was closely associated with corn prices. Since the midwest is the important commercial cream area, the rations fed to cows kept for the production of cream are made up largely of home-grown grains in the Corn Belt and contain considerable quantities of corn. The association was less pronounced for poultry ration and scratch feed and for dairy rations fed to cows in fluid milk areas, where a larger part of the rations is purchased, and is lowest for laying mash, which is a purchased feed.

Prices of hay and alfalfa meal have not followed corn prices as closely as do most of the concentrate feeds. One reason for this is that hay, being a more fibrous and bulky feed, does not compete directly with the higher-priced concentrate feeds, such as corn. Hogs and poultry, the two largest consumers of corn, use very little hay. Corn and other concentrates ordinarily are used to supplement hay for dairy and beef cattle and relatively large or small corn supplies do not substantially increase or decrease demand for hay. Also there has been less association between hay production and corn production than between corn production and the production of the other feed grains. This apparently is due in part to the longer season for growth and harvest of forages, and partly because of the wider geographic distribution of hay and other roughages.

Table 11.- Corn, oats, and barley: Stocks by quarters, United States, 1947-50 1/

Year	January 1 1,000 bushels	April 1 1,000 bushels	July 1 1,000 bushels	October 1 1,000 bushels
	Corn			
1947	2,208,291	1,358,098	717,009	285,594
1948	1,555,504	882,575	454,281	125,386
1949	2,641,330	1,854,704	1,292,755	825,317
1950	2,829,664			
	Oats			
1947	934,432	567,570	276,312	1,026,528
1948	779,991	431,400	183,680	1,251,448
1949	974,544	607,202	295,206	1,129,325
1950	876,026			
	Barley			
1947	175,691	111,134	55,565	248,116
1948	187,843	115,614	51,929	295,683
1949	230,845	161,948	100,908	251,260
1950	194,672			

1/ Stocks in all positions, including stocks on farms, at terminal markets, and at interior mills, elevators, and warehouses.

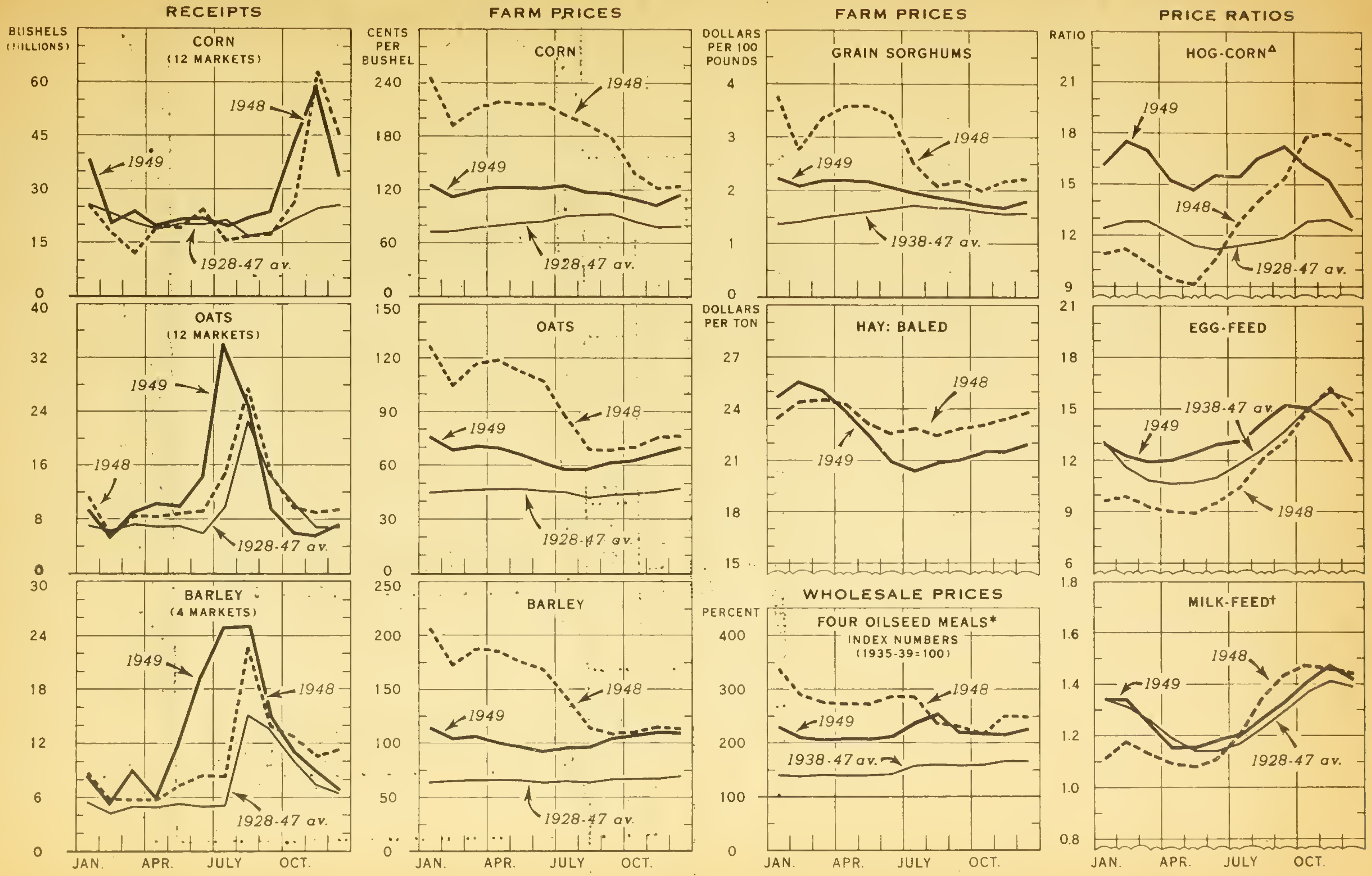
Table 12.- Corn, oats, and barley: Distribution of January 1 stocks, United States, average 1944-48, annual 1948, 1949, and 1950

Year	Farm	Terminal markets	Government-owned 1/	Interior mills, elevators, and warehouses	Total
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels
			Corn		
Average 1944-48	1,900,346	15,047	248	39,799	1,955,440
1948	1,506,283	13,218	---	36,003	1,555,504
1949	2,547,912	50,330	---	43,088	2,641,330
1950	2,401,279	51,688	278,154	98,543	2,829,664
			Oats		
Average 1944-48	807,905	20,153	---	34,815	862,873
1948	733,303	14,037	---	32,651	779,991
1949	928,377	11,434	---	34,733	974,544
1950	819,701	19,029	---	37,296	876,026
			Barley		
Average 1944-48	128,100	23,900	---	45,114	197,114
1948	117,300	26,581	---	43,962	187,843
1949	156,357	16,457	---	58,031	230,845
1950	107,532	32,630	2/ 2,441	52,069	194,672

1/ In bins or other storage owned or controlled by CCC. Additional Government-owned stocks are included in reports for other positions.

2/ In Canadian elevators.

MARKET RECEIPTS, PRICES OF SPECIFIED FEEDS, AND LIVESTOCK-FEED PRICE RATIOS



*SOYBEAN, COTTONSEED, LINSEED AND PEANUT CAKES AND MEALS

△BASED ON PRICES RECEIVED BY FARMERS

†MILK-FEED PRICE RATIO INCLUDES DAIRY PRODUCTION PAYMENTS FROM OCTOBER 1943 THROUGH JUNE 1946

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Table 13.- Corn: January 1 stocks and January-September disappearance, United States, 1938-50

(Data for cover page)

Year	Total stocks: January 1 1/	Disappearance January-September: Domestic	Net exports	Total	Carry-over October 1 1/
	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.	Mil. bu.
1938	1,707	1,212	134	1,346	361
1939	1,868	1,264	20	1,284	584
1940	2,041	1,322	31	1,353	688
1941	2,030	1,378	7	1,385	645
1942	2,182	1,683	8	1,691	491
1943	2,284	1,917	4	1,921	1/ 363
1944	1,986	1,750	5	1,755	231
1945	2,124	1,794	15	1,809	315
1946	1,904	1,711	20	1,731	173
1947	2,208	1,797	125	1,922	286
1948	1,555	1,424	6	1,430	125
1949	2,641	1,722	94	1,816	825
1950	2,830				

1/ Farm, terminal market, and Government-owned stocks, 1938-43. Stocks in all positions, including interior mill, elevator, and warehouse stocks, 1944 to date.